

**THE U.S.D.I. OFFICE OF SURFACE MINING (OSM)  
INITIATIVES RELATED TO REFORESTATION OF MINED LAND<sup>1</sup>**

by

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**Abstract.** Beginning in May of 1998, the Office of Surface Mining (OSM) has taken an active role in examining methods that would enhance post mining land use plans that promote the planting of trees on active and abandoned surface coal mines. Benefits of reforestation are many and would include improving wildlife habitat and recreation opportunities, restoration of clean water resources, erosion prevention, and the creation of new economies based on forest products. The primary activities and accomplishments of OSM in this area have been to: (1) conduct a Policy Outreach Symposium in Washington D.C., January 14, 1999, that provided clarification on current OSM regulations and policy on tree planting; (2) conducted a Technical Interactive Forum with published proceedings March 23 & 24, 1999, to: (a) highlight information on successful reforestation efforts and technologies that are currently being used to enhance reforestation on active and abandoned coal mined lands, (b) identify region specific impediments to tree planting, and (c) review recommendations for removing unnecessary barriers to tree planting and promoting technologies with potential for enhancing tree planting efforts; (3) conducted a public outreach to assess and make recommendations on potential revisions to OSM/State policy and regulations; (4) invite individual State programs to develop a State specific Reforestation Team that could develop a plan for improving reforestation efforts; (5) initiate the development of new opportunities for training, (6) provide access to reforestation information, organizations, and services through a Website; (7) develop an annotated bibliography of Reforestation and Mining Publications, and (8) promote the communication of reforestation success stories through informational brochures and videos.

Additional Key Words: Reforestation and Mining Initiatives

**Introduction**

Reforesting mined lands can play an important role in enhancing environmental protection. There are multiple benefits to reforestation, including restoration of clean water and air resources, erosion prevention, wildlife habitat, recreational opportunities, commercial forestry, and other economic

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opportunities based on forest products.

In order to encourage reforestation, OSM developed an initiative on reforestation in 1998, and brought these plans to fruition in 1999 through a series of events and products. The remainder of the paper will document the highlights of the Reforestation initiatives that OSM has undertaken since that time.

### **Reforestation at Surface Coal Mines:**

#### **Part I:**

#### **Policy Outreach Symposium**

On January 14, 1999, OSM invited representatives of academia, wildlife organizations, the mining industry and associations, electric utilities, reforestation contractors, State and Tribal mining regulatory authorities, related Federal agencies, and environmental organizations to a policy outreach symposium in Washington, D.C. There were 75 participants at this event. Observations made during the symposium noted that: (1) the reported State statistics on current reforestation efforts that 40-65 million trees have been planted to date probably significantly underestimate both the number and acreage of trees planted. This is due to the lack of any systematic method for keeping track of reforestation efforts; (2) it was the consensus of those present that all interest groups favor efforts to plant more trees; (3) more than one speaker indicated that trees could be planted economically and competitively with pasture; and (4) the States of Virginia and Kentucky already have developed specific guidelines and policies that promote reforestation. The group also made the recommendations that: (1) OSM consider revising its regulation at 30 CFR 816/817.116(b)(3)(ii) that requires at final bond release that 80 percent of the trees be in place for 60 percent of the liability period; (2) insure that normal husbandry requirements at 30 CFR

816/817.116(b)(4) do not discourage the replanting of trees; (3) insure that the ground cover standard at 30 CFR 816/817.116(b)(3)(iii) does not place a competitive disadvantage on trees; (4) consider requiring tree planting for situations where it is the highest and best use of the land; (5) request additional appropriations for funds to plant trees on abandoned mine lands; (6) incorporate innovations in reforestation excellence into the OSM awards program; (7) make additional reforestation training opportunities available through the OSM technical training program; and (8) consider evaluation of reforestation reclamation plans to ensure that the land capability to produce productive tree growth will be restored.

### **Enhancement of Reforestation at Surface Coal Mines:**

#### **Part II:**

#### **A Technical Interactive Forum**

On March 23 and 24 of 1999, the USDI Office of Surface Mining (OSM) invited representatives from the States, the coal industry, forestry and fish and wildlife agencies, universities, consultants, and other concerned agencies to participate in a technical interactive forum that would examine methods for enhancing post mining land use plans that promote the planting of trees on active and abandoned surface coal mines. There were 160 participants at this event from 28 States. Thirty-eight summary talks by knowledgeable speakers were organized to provide maximum opportunity for attendees participation. The forum was organized into five major sessions that emphasized: (1) Status of OSM and State Reforestation Efforts; (2) Interest group Perspectives on Constraints, Experiences, Trends, and Needs; (3) Status of Reforestation Technology; (4) Case Studies of Reforestation Success Stories; and (5) Interest Group

Recommendations on where to go from here. The participant comments were recorded, organized, and edited for the proceedings. The proceedings, which were published and made available upon request by OSM, captured all of the event itself as well as the results of the participant survey and the Reforestation Steering Committee recommendations.

Following this event, the Reforestation Steering Committee made 28 recommendations to the OSM Director based on the results of the forum in the categories of: (A) **OSM HEADQUARTERS LEADERSHIP ROLES:** (1) OSM needs to continue to take the lead and keep the pressure on to produce actual change in reforestation efforts; (2) OSM headquarters needs to produce a policy statement in writing from the Director encouraging reforestation efforts; (3) OSM needs to provide specific funding options so that State AML programs will be encouraged to plant more trees; (4) OSM needs to identify one or more appropriate teams of people that will ensure that this initiative makes satisfactory progress; (5) OSM should have a team to evaluate regulations in light of forum results; (6) OSM needs to provide a special annual award to highlight innovations in reforestation. Awards should consider several categories such as Hardwoods, Softwood, Bottomland, Riparian, Appalachian, Midwest, Arid West; and (7) OSM needs to develop a budget and plan for implementation; (B) **OSM EDUCATION LEADERSHIP ROLES:** (1) Need to make sure that current OSM Technical Training Program classes incorporate recommendations from the forum concerning reforestation; (2) Develop a specific OSM Technical Training Program class directed to field inspectors and coal operators along the lines of the Wetland course that should be very region specific; (3) Partner with industry to develop demonstration sites for educational purposes; (4) Emphasize efforts that promote

education opportunities and communication for field people; and (5) Develop an educational program for presentation to local schools. Could be used for Earth Day programs; (C) **REFORESTATION STEERING COMMITTEE LEADERSHIP ROLES:** (1) OSM needs to maintain the reforestation steering committee or like national team to ensure continued progress of initiative; and (2) OSM needs to develop a Reforestation Website similar to the CCB Information Network Website to provide a means for maintaining ongoing communication concerning sources of information, research, upcoming events, State initiatives, educational opportunities, etc.; (D) **OSM REGIONAL LEADERSHIP ROLES - STATE BY STATE INITIATIVES** (1) Solutions need to be developed on a State by State basis. This is not a one size fits all issue; (2) Need to get top levels of State governments to buy into the process; (3) Need to get OSM field offices on board; (4) Attention needs to be given to developing approvable methods for reducing grading that results in lower compaction rates; (5) Plant high quality trees and shrubs and allow for including for purposes of bond release the counting of acceptable invaders; (6) Look for positive incentives to encourage reforestation; (7) Develop State by State Policies and guidance for reforestation enhancement; (8) Forestry needs to be seen as a multiple land use that is favorable to wildlife; (9) Need to determine how the planting of high value trees for commercial forestry can be approved as a land use option on Mountain Top Removal sites; (10) Need to develop native seed mixes that will enhance reforestation because of low maintenance requirements and compatibility with trees; (11) Need to provide State by State cost comparisons for producing productive forests versus low value compacted pastures; (12) Need to sell the economic advantages of forestry; and (13) Assess potential for approving

State amendments that allow for proof of revegetation success earlier in the liability period.

### **Decisions of the OSM Director and Management Council**

On July 22, 1999, the Director and the management council met to discuss the reforestation steering committee recommendations. The Director and management council were very supportive of these recommendations and established the following priorities: (1) The Director's office will send an invitation to the States offering OSM's assistance with technical teams including State staff and industry to revise State regulations, guidance, and policy as needed to promote reforestation; (2) The Director will also request specific AML funding for State reforestation efforts on AML projects and provide an annual reforestation award category; (3) the technical education branch of OSM will begin investigating the development of a reforestation technical training course; and (4) The reforestation steering committee will initiate work on a reforestation Web site and develop methods for publicizing reforestation success stories.

On November 30, 1999, the Director mailed letters of invitation to heads of 45 State and tribal coal mining programs. In these letter, the Director of OSM offered the States and Tribes an opportunity to develop partnerships with OSM, other State agencies, the coal industry, and interest groups that would develop State and Tribe specific methods to encourage the establishment of more and better forests on active and abandoned mined lands. The Director also encouraged the States and Tribes to work with the Reforestation Steering

Committee to put together brochures, videos, or other methods of communicating reforestation success stories to the rest of the coal mining community. To date, the States of Maryland, Montana, North Dakota, and Pennsylvania have indicated an interest to assisting OSM with this effort.

### **The Reforestation Steering Committee**

The Reforestation Steering Committee is made up of representatives from the Coal Research Center at Southern Illinois University in Carbondale, the Kentucky Department of Surface Mining Reclamation and Enforcement; Miami University at Oxford, Ohio; the Missouri Land Reclamation Program; Southern Illinois University at Carbondale; TXU; the University of Kentucky at Lexington; OSM; and Virginia Polytechnic Institute and State University.

The steering committee was first formed in October of 1998 for the purpose of planning the Reforestation Technical Interactive Forum. Since the completion of this assignment, the committee has accepted the challenge by OSM to produce the following products with the potential to encourage and enhance reforestation on surface coal mined lands: (1) Brochures and Videos to advertise State Reforestation Success Stories; (2) an Annotated Bibliography on research publications on reforestation of mined lands; and (3) a Reforestation and Mining Informational Website.

### **The Reforestation and Mining Website**

In December of 1999, the reforestation steering committee published its first reforestation Website that includes: (1) a home page explaining the purpose of the reforestation steering committee and the Reforestation Website; (2) the names, phone numbers, and e-

mail addresses of the steering committee; (3) access to related Websites on reforestation; (4) State technical guidance documents for reforestation on mine land; (5) success stories of mines that are actively involved in reforestation from across the nation; (6) a discussion page to provide opportunities for interaction on the Internet; and (7) an electronic copy of the OSM publication "Proceedings of Enhancement of Reforestation at Surface Coal Mines Part II: A Technical Interactive Forum." Other items will become available on the Website as the information becomes available. The Website can be accessed directly at <http://www.mcrc.org/osmre.gov/tree> and from the OSM Home Page at <http://www.osmre.gov>.

### **Literature Cited**

Vories, K. C., and D. Throgmorton (eds.). 1999. Proceedings of Enhancement of Reforestation at Surface Coal Mines Part II: Technical Interactive Forum. Southern Illinois University at Carbondale. 274 p.